2.2.5 Hazardous Wastes and Materials

This section is based on the Hazardous Waste Initial Site Assessment (ISA) (August 2008) prepared by LSA Associates, Inc., an ISA prepared by GeoCon Geotechnical & Environmental Consultants (GeoCon) (May 2000), the Revised Preliminary Geotechnical Report prepared by the California Department of Transportation (Department) (August 2006), and the Ultimate Aerially Deposited Lead (ADL) Site Investigation Report prepared by Laguna Geosciences, Inc. (December 1, 2006). These documents are on file and available for review at the Department District 12 Environmental Engineering Branch.

2.2.5.1 Regulatory Setting

Hazardous materials and hazardous wastes are regulated by many State and federal laws. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health, and land use.

The primary federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The purpose of CERCLA, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. RCRA provides for "cradle to grave" regulation of hazardous wastes. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992.
- Clean Water Act (CWA).
- Clean Air Act (CAA).
- Safe Drinking Water Act.
- Occupational Safety and Health Act (OSHA).
- Atomic Energy Act.
- Toxic Substances Control Act (TSCA).
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

In addition to the acts listed above, Executive Order 12088, Federal Compliance with Pollution Control, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976, and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper handling of hazardous material is vital if it is disturbed during project construction.

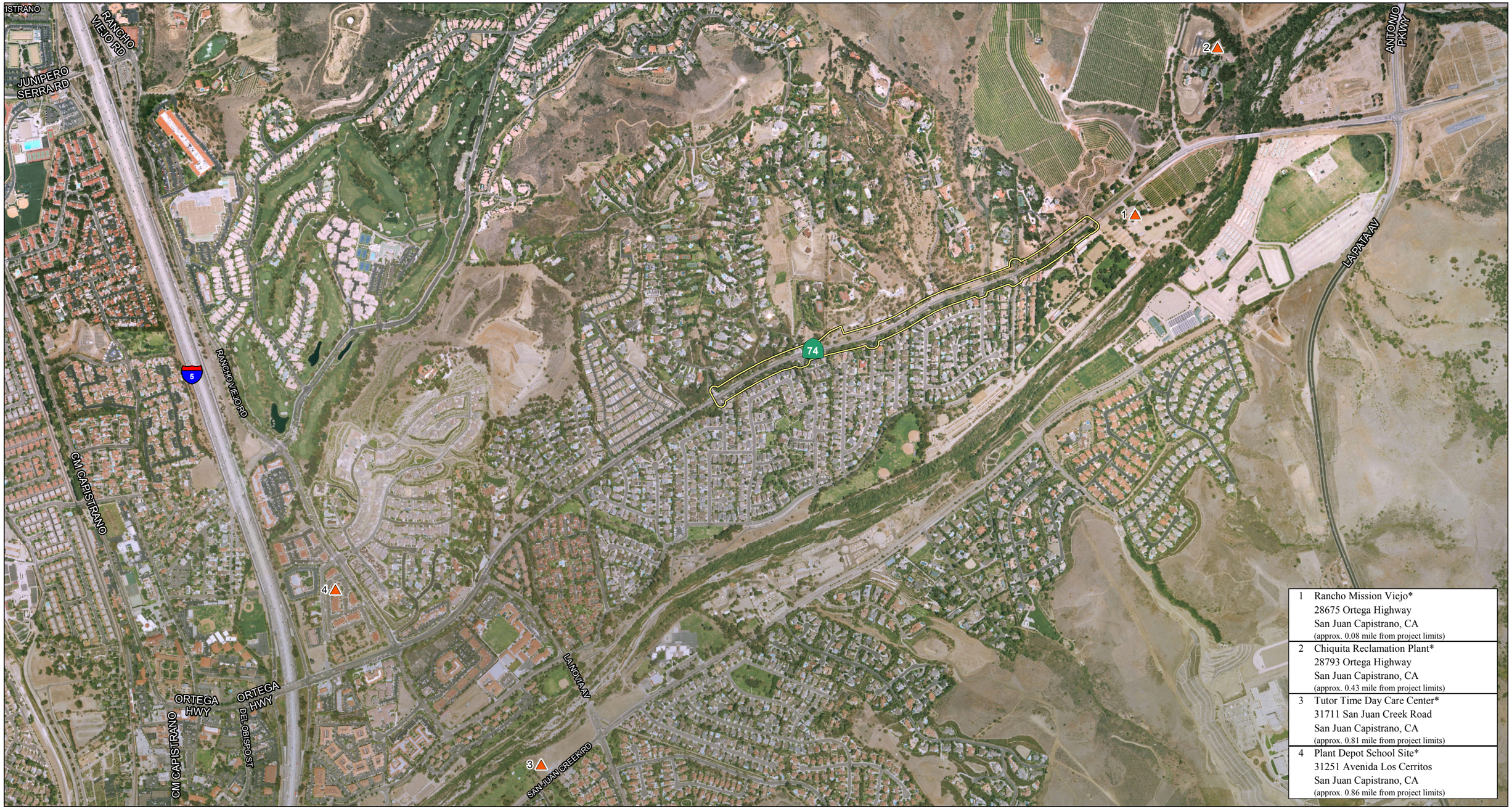
2.2.5.2 Affected Environment

The ISA was conducted to determine whether the proposed project area could be impacted by hazardous waste. The work effort for the ISA included a search of government records to obtain a listing of properties or known incidents from State or federal databases for hazardous waste sites to identify any potential for the existence of contamination within the project area.

The search of federal, State, and local regulatory agency databases identified four known hazardous releases within 0.75 mi of the project site, including two leaking underground storage tanks (LUSTs) and two State sites (State) with reported hazardous releases. These sites are summarized in Table 2.2.5-1 and depicted in Figure 2.2.5-1.

The ISA revealed no evidence of recognized environmental conditions involving hazardous waste on or immediately adjacent to the project site except for the following:

- **Power pole-mounted transformers:** Transformers within the project limits that are anticipated to be disturbed as part of construction of the proposed project may contain polychlorinated biphenyls (PCBs). Transformers should not be considered a potential environmental concern during construction unless they are observed to be leaking.
- **Yellow paint and tape used for pavement marking:** Yellow paint traffic stripes used prior to 1997 may exceed the hazardous waste criteria under Title 22, California Code of Regulations (CCR), and require the disposal in a Class I disposal facility authorized to accept this type of wastes.



1	Rancho Mission Viejo* 28675 Ortega Highway San Juan Capistrano, CA (approx. 0.08 mile from project limits)
2	Chiquita Reclamation Plant* 28793 Ortega Highway San Juan Capistrano, CA (approx. 0.43 mile from project limits)
3	Tutor Time Day Care Center* 31711 San Juan Creek Road San Juan Capistrano, CA (approx. 0.81 mile from project limits)
4	Plant Depot School Site* 31251 Avenida Los Cerritos San Juan Capistrano, CA (approx. 0.86 mile from project limits)

* THESE SITES ARE UNLIKELY TO IMPACT THE PROJECT

FIGURE 2.2.5-1

LEGEND

Project Area

Hazardous Release Sites

N

0 500 1,000 FEET

SOURCE: AirPhotoUSA (6/07); TBM (2007); LAN Engineering (4/08)

i:\cdt0802\gis\HazwasteSites_Fig2_2_5_1.mxd (11/24/2009)

Lower SR-74 Widening Project

Hazardous Site Location Map

12-ORA-74 PM 1.0/1.9 (KP 1.7/3.0)

EA# 086920

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Table 2.2.5-1 Hazardous Waste Releases within and Adjacent to the Project Limits

Figure 2.2.5-1 ID No.	Address, Distance from Subject Site	Database	Status
1	Rancho Mission Viejo 28675 Ortega Highway San Juan Capistrano, CA (approximately 0.8 mi east of the project limits)	LUST	One LUST containing gasoline was discovered on March 18, 1992. The release impacted groundwater. A letter from County of Orange Health Care Agency (COHCA) was issued on May 9, 2002, indicating site closure.
1	Chiquita Water Reclamation Plant 28793 Ortega Highway San Juan Capistrano, CA (approximately 0.45 mi northeast of the project limits)	LUST UST	One LUST containing gasoline was discovered on February 24, 2000. The release impacted groundwater. The site was issued site closure on October 19, 2001.
3	Tutor Time Day Care Center 31711 San Juan Creek Road San Juan Capistrano, CA (0.47 mi from the project site)	State	According to the database search report, a Preliminary Assessment Report was conducted at Calmortgage and School Site Properties for future development as Tutor Time Day Care Center. On March 27, 2003, Department of Toxic Substances Control (DTSC) determined that "no action" was necessary regarding investigation or remediation of this facility.
4	Plant Depot School Site 31251 Avenida LOS Cerritos San Juan Capistrano, CA (0.74 mi from the project site)	State	According to the database search report, a Voluntary Cleanup Program was completed at the Plant Depot School Site on March 12, 2003. On January 13, 2005, DTSC determined that a "voluntary cleanup program" was necessary regarding investigation or remediation of this facility. According to the Envirostor database maintained by DTSC, the potential constituents of concern include arsenic and nitrates. No other information is available at this time.

Source: Hazardous Waste Initial Site Assessment (May 27, 2008).
DTSC = Department of Toxic Substances Control
mi = mile
LUST = leaking underground storage tank
UST = underground storage tank

There is a potential for old transformers within the project site to contain PCBs. A list of potential transformers that would be disturbed as part of the proposed project was submitted to the local utility, SDG&E, in order to determine if older PCB-containing transformers were located in the project area. Table 2.2.5-2 lists the transformers that may be disturbed within the project area.

Transformers installed prior to 1980 have the potential to contain PCBs. SDG&E records indicate that three transformers (D4911057410, P25688, and P126641) are unlikely to contain PCBs. Information contained within a letter issued by SDG&E on June 25, 2008, states that based on their statistical sampling and testing program, it is unlikely that equipment along Ortega Highway is PCB contaminated; however, according to SDG&E, the only way to determine this with certainty is by testing. A charge would be assessed for testing of transformers for PCBs. In the event that a

Table 2.2.5-2 List of Potentially Impacted Transformers

Transformer Type	ID Number	Approximate Location
SDG&E Concrete Pedestal Mounted*	D4711057410	South side of Ortega Highway, approximately 450 ft east of Calle Entradero
SDG&E Concrete Pedestal Mounted	D4912257437	South side of Ortega Highway, approximately 55 ft west of Via Cordova
Pole Mounted	10375314H	South side of Ortega Highway, approximately 530 ft west of the eastern project limits
Pole Mounted*	P25688	South side of Ortega Highway, approximately 50 ft west of the eastern project limits
Pole Mounted	P25686	North side of Ortega Highway, approximately 150 ft east of Shadetree Lane
Pole Mounted	P208244	Northeastern corner of Ortega Highway and Shadetree Lane
Pole Mounted*	P126641	Northwestern corner of Ortega Highway and Shadetree Lane
Pole Mounted	838070H	Near the northeastern corner of Ortega Highway and Palm Hill Drive
Pole Mounted	1014509H	Near the northwestern corner of Ortega Highway and Palm Hill Drive

Source: Visual Observation and Confirmation by Department Engineer Le-Ha Tran.
* Not anticipated by SDG&E to contain PCBs
ft = feet
PCB = polychlorinated biphenyl
SDG&E = San Diego Gas and Electric

transformer is found to be contaminated, SDG&E would refund the cost of testing. A copy of the SDG&E response letter can be found in Appendix F of the ISA.

The records search conducted for the ISA listed two LUST incidents and two State-listed facilities within 0.75 mi of the project site. One nongeocoded solid waste landfill (SWL) facility was also listed approximately 0.6 mi from the eastern perimeter of the project site. Nongeocoded sites consist of sites where missing or inaccurate information has been provided by the reporting agency, or where insufficient information prevents the proper placement of the site on a given map.

The SWL site, identified as the San Juan Capistrano Landfill or Prima Deshecha Landfill, is currently undergoing leachate monitoring. Leachate testing is performed on an annual basis and is implemented by the County of Orange Integrated Waste Management District (IWMD). However, because the project is located 0.6 mi south of the eastern project limits and groundwater is anticipated to flow south and away from the site, it is unlikely that this nongeocoded SWL site will pose an environmental concern during construction of the proposed project.

The first LUST site is located approximately 220 ft east of the project limits and is identified as the Rancho Mission Viejo facility. Two steel gasoline tanks (500 and 1,000 gallons in size) were removed at this facility on March 18, 1992. During this removal, contaminated soil was discovered in the area of the former USTs. Approximately 400 cubic yards of contaminated soil was removed and disposed of at a soil recycling facility on December 17, 1992.[1] Vapor extraction was utilized to remediate the remaining contaminated soil and groundwater on site. A Remedial Action Completion Certification letter issued by the County of Orange Health Care Agency (COHCA) indicated that the site investigation and corrective action completed for this site was in compliance with the requirements of subdivisions (a) and (b) of Section 25299.37 of the Health and Safety Code, and no further action was required.[2] A Groundwater Monitoring Report dated January 15, 2000,[3] was reviewed to verify the extent of the soil and groundwater contamination at the site. Based on the information provided within the report, contaminated soil and groundwater appeared to be limited to the southern end of the project limits, away from SR-74. In addition, the Groundwater Monitoring Report indicated that groundwater flow was to the south-southeast, away from the proposed project. Therefore, this site is unlikely to pose a concern to the project site.

The second LUST site is located approximately 550 ft northeast of the project limits and is identified as the Chiquita Water Reclamation Plant. This facility has a documented release of gasoline into the groundwater. However, the LUST was closed and removed from the site, and the LUST facility was issued site closure on October 19, 2001. Therefore, the leak is unlikely to pose a concern during construction of the proposed project.

Two State-listed facilities have been identified as Tutor Time Day Care Center and Plant Depot School Site. According to the database search, the Department of Toxic Substances Control (DTSC) has reviewed the Phase I Environmental Assessment for the Tutor Time Day Care Center site and has made a No Action determination for this facility. Therefore, it is unlikely that this site will pose a concern during construction

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1 Case Closure Summary, Rancho Mission Viejo, December 15, 2000.

2 COHCA, Remedial Action Completion Certification, May 9, 2002.

3 Environmental Equalizers, Inc., Groundwater Monitoring Report–Rancho Mission Viejo Office, January 15, 2000.

of the proposed project. The Plant Depot School Site has been historically utilized as an orchard and a nursery. According to the EnviroStor database maintained by DTSC, the potential contaminants of concern include nitrate and arsenic. However, due to the distance away from the project site and the fact that there are no recorded impacts to groundwater, it is unlikely that this site will pose a concern during construction of the proposed project.

According to the Ultimate ADL Site Investigation Report,[1] 10 geotechnical test pits were advanced to a maximum depth of 15 ft between June 27 and 30, 2006. Soil samples were then collected from test pits at the surface. Additional soil borings were advanced at the project site between July 24 and August 2, 2006. These soil samples were collected and analyzed for total lead using EPA Method 6010B. The objective of the site investigation was to evaluate whether the soil lead concentration met the requirements of the Department District 12 Variance for reuse as fill at the project. All the total lead results, with the exception of the sample identified as SW-5 at 0 ft below ground surface (bgs), which was detected at 110 milligrams/kilogram, were within the range of concentrations considered as background levels for soils in California. Based on these results, the soil is considered nonhazardous and is acceptable for reuse as fill at the project site.

2.2.5.3 Environmental Consequences

Temporary Impacts

No Build Alternative

The No Build Alternative would not result in any construction and therefore, would result in no temporary impacts related to hazardous materials and wastes.

Alternatives 1 and 2

Power pole-mounted electrical transformers were observed within the project limits during the visual site survey and may contain PCBs if manufactured between 1929 and 1977.[2] A list of transformers potentially disturbed by the construction of the proposed project was sent to SDG&E. According to SDG&E, three out of the nine transformers listed in Table 2.2.5-2 were identified as using non-PCB-containing oils; however, according to SDG&E, the specific contents of these transformers are

[1] Laguna Geosciences, Inc., Ultimate ADL Site Investigation Report, December 1, 2006.

[2] EPA Web site www.epa.gov.

unknown unless tested. Therefore, if these transformers are observed to be leaking, they should be considered an environmental concern and would be handled accordingly.

Yellow traffic stripe and pavement marking materials (paint, thermoplastic, permanent tape, and temporary tape) were observed within the project limits during the visual site survey conducted for the ISA. Yellow paint traffic stripes used prior to 1997 may exceed hazardous waste criteria under Title 22 CCR and require disposal in a Class I disposal site.

Based on these conclusions and in addition to any coordination with regulatory agencies for approvals, permits, or site closures, additional investigation or monitoring efforts would be required. The procedures for hazardous materials investigation for the project are presented in Section 2.2.5.4. Build Alternatives 1 and 2 are anticipated to have a less than significant temporary hazardous waste impact.

Permanent Impacts

No Build Alternative

The No Build Alternative would not result in any construction and therefore, would result in no permanent impacts related to hazardous materials and wastes.

Alternatives 1 and 2

Operation and maintenance of the facilities proposed as part of the Build Alternatives would not introduce new sources of hazardous materials/waste but rather would continue existing exposure to transport of hazardous materials/waste associated with vehicles currently utilizing SR-74. No new permanent hazardous materials/waste impacts (direct or indirect) beyond existing conditions related to hazardous materials are anticipated and are considered less than significant.

2.2.5.4 Avoidance, Minimization, and/or Mitigation Measures

The avoidance measures below would avoid potential impacts related to hazardous materials and hazardous wastes encountered during construction of the Build Alternatives.

If the removal of yellow traffic striping, thermoplastic paint, and pavement will occur as part of the proposed project, testing and disposal of these materials shall be in accordance with Department SSP XE 15-300.

Prior to construction, any leaking transformers within the project limits that will be disturbed during construction of the project shall be considered a potential polychlorinated biphenyls (PCB) hazard unless tested and shall be handled appropriately.

To ensure that utility owners mark the locations of underground transmission lines and facilities, notify the Underground Service Alert of Southern California by calling 811 at least two working days prior to subsurface excavation.

Prior to the start of construction, a site-specific Health and Safety Plan shall be prepared for the proposed project that is consistent with California Department of Transportation requirements. The Plan shall include:

- Identification of key personnel.
- Summary of risk assessment for workers, the community, and the environment.
- Air Monitoring Plan.
- Emergency Response Plan.

As is the case for any project that proposes excavation, the potential exists for unknown hazardous contamination to be revealed during project construction. For any previously unknown hazardous waste/material encountered during construction, the procedures outlined in Appendix H in the ISA (Caltrans Unknown Hazards Procedures) shall be followed.

2.2.5.5 Level of Significance

The No Build Alternative will not have any temporary or permanent hazardous wastes and materials impacts.

The Build Alternatives would result in less than significant temporary indirect or direct impacts to hazardous wastes and materials. There would not be any permanent, direct, or indirect impacts to hazardous wastes and materials with the implementation of the proposed project.